FATAL CASE OF SYPHILITIC MYELITIS AFTER INTRAMUSCULAR INJECTION OF SALVARSAN.*

By VICTOR G. VECKI, M. D., San Francisco.

A clerk in a tobacco factory, aged 23 years, sullen, taciturn, and inclined to make misleading and contradictory statements, consulted me in January, 1910, for, what he called, a stubborn case of gonorrhea. Casually he showed me on February 12 a furuncle on his left forearm. Several boils developed in succession, but yielded rapidly to proper treatment.

March 24th when treating a beginning boil I discovered a syphilide and began to question the patient, who denied all knowledge of luetic infection; though, as was found out subsequently, he received at the hands of Dr. Zussman of San Francisco, in 1908, from June 1st to Sept. 3rd, intramuscular injections of sublimate for a syphilitic roseola that followed a typical indurated ulcer.

In spite of his denial I made the patient strip, found the characteristic scar of the primary infection, and of faucial involoment, ample adenitis, and unmistakable skin symptoms. The patient was not surprised when told that he must be treated for syphilis, and received at first six daily intramuscular injections of sublimate, and when he claimed inability to visit the office every day I gave him, on April 16th and 21st, each time an intramuscular injection of salicylic mercury. The patient, who led a somewhat strenuous night-life, and while not exactly an alcoholic, would, at occasions, and when in congenial company, take any kind of a liquid refreshment, became slightly salivated, was given a mouthwash and kalium iodatum internally, and advised to return for treatment as soon as the gingivitis subsided. He did not return until May 30, 1911.

It was found out later that he consulted Dr. Zussman in February of the same year and was advised to have an injection of 606.

When he came to me May 30th, he had, with the exception of swollen glands, no active symptoms of syphilis, but it is to be presumed that he must have felt some spinal symptoms, because so careless a young man would not have bothered with latent syphilis. In my mind there was no doubt whatever that this patient was in great need of anti-leutic treatment. In fact, I considered that in his case salvarsan was especially indicated, considering the previously experienced low tolerance of mercury.

The patient went to the hospital, and June 10th at noon 0.30 of salvarsan were injected in each side of the gluteal region. There was no reaction of any kind noticeable.

Absolute well-being prevailed the following day, no pain and no temperature. Both the nights spent at the hospital the patient slept soundly. He was eager to leave bed and the hospital.

Though told to await my visit, he left the hospital June 12th at 6 a. m. When later asked why he did that he answered that he saw no reason why he should have staved any longer, and besides, that he did not like the breakfast at the hospital and preferred the coffee at a well-known down-town bakery.

He walked to the electric car and after breakfast lit a cigar, strolled around and went to his place of business at 9 o'clock.

All this day he performed his duties at the factory, and, as he related afterwards, felt no untoward symptoms. After having partaken of a hearty dinner at a relative's house he began to feel a peculiar numbness in his legs, and, thinking that he needed exercise took an hour's walk. When near his home he felt very tired and thought that he barely managed to drag himself upstairs. Then he felt the first time that the flow of his urine was impaired; was, however, of the opinion that the bladder was at that time emptied. Towards morning of June 13th he could not urinate at all, but felt great desire to do so. He dressed with difficulty and went to a physician in the neighborhood who catheterized him. The patient had great difficulty in returning to his home, greater difficulty in undressing himself, and began to drag his legs. An ambulance was sent for, and the young man, now decidedly paraplegic, returned to the hospital. Temperature 98°, pulse 76, respiration 22. Complete retention of urine; patient was catheterized, given a high soapsuds enema, and, under the impression that the intramuscular injection was to be blamed in some mysterious way, hot compresses to the buttocks were ordered, though the patient did not complain about any pain. Sensitiveness greatly diminished from the navel downwards, motility limited to a penible lifting of the legs and moving of the toes.

June 14: Temperature 99.6° to 100.4, hemiplegia complete in every respect.

June 15: Temperature normal to 99°, Dr. Krotoszyner called into consultation, ordered electric baths, ice-bag to the head and hot-water bag to the feet.

June 16: Sensibility of the stricken area improved, motility of the toes perceptible. Temperature 100.2° to 100.8°.

June 17: Temperature 98.6° to 101°. Patient is morose, but claims that he has felt no pain anywhere at any time since the salvarsan injection.

June 20: Patient has no control of his sphincters and involuntary defecations start; still has to be regularly catheterized. Slight improvement of sensibility.

June 22: Feels better, voluntary moving of toes perceptible, but clonic spasmodic movements of the toes whenever patient succeeded in moving them.

June 23: Drs. Albert Abrams and Krotoszyner were called into consultation. It was clear to all consultants that arsenic could have no bearing upon the patient's condition. Inunctions of unguentum hydrargiri cinereum and large doses of kalium iodatum were ordered.

June 24: Another consultation with Drs. Newmark and Krotoszyner. Same conclusions. Reflexes that were missing before have returned partially.

June 25: Decubitus started, and made from this day most rapid progress. Temperature 103.8°.

June 27: Inunctions had to be discontinued as patient refused them, doses of kalium iodatum were increased. Temperature continually over 102°.

June 28: Decubitus spreading most rapidly in spite of close attention and proper treatment. Patient was suspended for three hours.

June 29: Top of right big and third toe show black discoloring; patient feels cold. Temperature 100.8° to 102.4°.

June 30: Feeling in legs better, moving of toes perceptible. Temperature 103.2°. Patient shows decided euphory, inunctions resumed.

July 1: Sensibility constantly improving, temperature to 101.6°, decubitus spreading and deepening in spite of suspensions, peroxide, aristol, stearate of zinc, etc.

July 3: Involuntary passing of urine begins. Suspensions gradually prolonged, temperature lower.

July 6: Patient constantly improving, temperature lower, suspensions continued.

July 13: After a consultation with Drs. Newmark and Krotoszyner prolonged hot baths were ordered.

July 14: After a severe and prolonged chill temperature rose to 104°, patient refuses inunctions.

July 16: Inunctions resumed, patient's general condition and feeling improved.

July 18: Feels very bad, constant cold sweats very annoying. Decubitus deepening, large, ill-smelling seepage. Patient passed 120 cc. into urinal Inunctions discontinued.

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July 19: Drs. Newmark and Krotoszyner in consultation. Sensibility on left side to the navel, right side to the lower border of the seventh rib. Patelar reflexes, left very feeble, right not preceptible. Double Babinski. Cold and heat felt on left side to below the navel, on right side just above the navel. At 6 p. m. I injected 0.6 salvarsan into the right arm intravenously. Temperature rose from 101° to 102°, the patient had 30 minutes later a severe chill that lasted 32 minutes.

July 20: Vomiting a large amount of stomach contents and yellowish fluid. Temperature 105.6°.

July 21: At 12:10 a. m. a chill lasting 26 minutes and so severe that pulse could not be taken. Temperature 99.8°; rose rapidly to 102.4°. Patient constantly chilly and nauseated. Jerking and twitching of the lower limbs begins, urine and stool continue to pass involuntarily, other conditions unchanged. Receives now three times a day 30 drops of the saturated solution of kalium iodatum.

July 22: Nauseated, refuses food.

July 23: Odor from sores very offensive. Temperature 103° to 104°. Veronal for sleeplessness.

July 24: Was able to pass 120 cc. of urine voluntarily. Refuses to be suspended. Wine of camphor used on decubitus sores, considerable seepage, very bad odor. Difficulty in keeping nurses increases.

July 25: Patient very drowsy. Most of the urine passes involuntarily, bladder at time of catheterizing almost empty; use of catheter discontinued.

July 26: Refuses all medication, but takes sulphonal at night. Temperature constantly between 103° and 104°. Patient presents a characteristic facies Hipocratica, refuses all food, but manages to pass 140 cc. of urine voluntarily.

July 28: Traces of albumen in urine.

July 29: Patient improves under stimulation by whiskey; appetite better.

July 30: Collapses again, a very annoying cough appears. Heroin given.

July 31: Odor unbearable, nurses have to be relieved frequently, large amount of pus from main sore.

Aug. 1: Dr. Krotoszyner in consultation advises that a regular Zittmann treatment be given, as he saw good results in most desperate cases. The bones in both hips are now exposed by decubitus. Temperature 100.4° to 100.8°. Cough can be controlled by heroin hypodermatically only.

Aug. 2: Zittmann decoction given lege artis. While hip is being dressed, the breaking of a small artery caused some bleeding until controlled by pressure. Patient very drowsy, almost comatose.

Aug. 4: Decubitus sores begin to dry up, look very dark.

Aug. 5: Patient improving, eats better, temperature lower. No change in paralysis.

Aug. 7: Drowsy and exhausted, wishes to be left alone. Sores bleeding at times.

Aug. 8: Unable to swallow the entire amount of the Zittmann decoction, coughing a great deal. Wine given upon request.

Aug. 10: Decubitus sores look exceedingly bad. Patient suffers and is given morphine hypodermatically. Temperature 100° to 103°, pulse 134, respiration 26.

Aug. 13: Slight improvement, appetite better, temperature 101°.

Aug. 15: Constantly dozing, refuses food, Zittmann discontinued.

Aug. 16: Dr. Krotoszyner in consultation suggests intravenous injections of sublimate, of which six altogether were given up to Aug. 23.

Aug. 18: Urine contains large amounts of albumen.

Aug. 19: Patient feels better and is very optimistic, slept well after 1-3 grain of morphine hypodermatically, appetite better.

Aug. 22: Very weak and tired. Hipocratic face reappears and is now very pronounced.

Aug. 23: Sores are almost dry, no seepage, very little odor. Temperature 101.6° to 102.6°.

Aug. 25: Pulse irregular and weak. At night hypodermic injections of ½ grain morphine with 1/60 grain of atropin relieves cough and gives rest.

Aug. 28: Pulse cannot be counted, temperature 98.2° to 98.4°, perspiring and coughing constantly. Asks for some medicine. Aqua laurocerasi with morphine given.

Aug. 29: Drowsy and weak, temperature 98.4°, pulse 104, respiration 16.

Involuntary urination and defecation continue to the end, which came on this day at 4:40 p. m.

Discussion.

Dr. Leo Newmark: Regarding Dr. Vecki's paper the question suggests itself as to what is the relation between the injection of the salvarsan and the affection of the spinal cord that ensued. The relationship of time seems to suggest connection between the two events. When I was called into consultation on this case, basing my opinion upon the literature on the subject, and upon the pleas made by Prof. Ehrlich, I decided that the young man would have gotten into this condition, only a little later, if he had not had salvarsan. Upon postmortem we found extensive softening of the cord; disease of the blood vessels was found in all parts of the cord, the cervical, dorsal and lumbar regions. Some of the blood vessels were so diseased that it was only with the greatest diffidence that we could identify them as blood vessels. We had Dr. Rusk examine them; he first thought they were blood vessels, then he thought they were not and then he gave it up. It was only after consulting Dr. Ophuls that we had sufficient confidence to identify them as such. It was beyond all reason to assume that salvarsan could have produced the condition of affairs we found anatomically. There is every reason to believe that syphilis did it in this case as we know syphilis can do it, and in a great many cases has done it.

Dr. Wm. Ophuls: I agree with Dr. Newmark absolutely in regard to the specific character of the lesions found and also in the statement that there is nothing at all that would indicate such lesions could possibly be due to arsenic in any form.

V. G. Vecki, M. D.: Of course, I am mighty glad that the unanimous verdict of all the consultants and of the gentlemen discussing this case is "not guilty."

In regard to the further use of salvarsan in my practice I must say, that, while I have never had trouble with any of my syphilitic patients before, and while the first disagreeable case I had was with this, my thirteenth intramuscular injection of salvarsan, I am not going to give up the use of this new, powerful and interesting remedy. The results are too good in most cases and the demand for salvarsan is, I am sure, going to increase until something "better yet" is found.

We know, however, that salvarsan does not displace mercury, and I personally impress my patients with the necessity of a thorough mercurial treatment in conjunction with the 606.

There can be no doubt that the young man under discussion died of luetic myelitis, and that Dr. Newmark is right when he says, that when such cases happen under, and in spite of mercurial treatment, we would not think of blaming it on to mercury; still I cannot help but think that this one patient was helped along in some way to his premature grave, and I cannot help but ask myself, "Why should such a fatal syphilitic condition begin just at the time when the patient is given a potent antisyphilitic remedy?" And I can answer myself only when I remember that my old teacher, the late Sigmund of Vienna, said that in syphilis everything is possible. Therefore we will see surprises with and without salvarsan, with and without mercury, and with and without Wassermann and Noguchi.